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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,148	11/10/2003	John Werner Bulluck	TRIA:002D1	6075

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EXAMINER

SELLERS, ROBERT E

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 05/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/706,148

Applicant(s)

BULLUCK ET AL.

Examiner

Robert Sellers

Art Unit

1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 24-31 and 88-90 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 24-31 and 88-90 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26 and 88 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 26 and 88 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Page 9, lines 21-22 and claim 26, lines 10-12 list trimethacrylates of butylene glycol, polyethylene glycol, bisphenol A and ethoxylated bisphenol A. These compounds are dihydroxy-functional compounds whereupon reaction with methacrylic acid yields only dimethacrylates by virtue of the reaction between each of the two hydroxyl groups and the carboxyl group of methacrylic acid. More favorable consideration would be given to the deletion of the term "and triacrylates" from page 9, line 20 and the separate recitation of triacrylates of pentaerythritol, and the replacement of the term "trimethacrylate" with respect to the aforementioned compounds with the word "dimethacrylate."

The second denotation of the compound "N,N-dimethylaniline" in claim 88 is identical to the preceding compound and should be changed to "N,N-diethylaniline" in accordance with page 11, line 12.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 24-28, 31 and 88-90 are rejected under 35 U.S.C. 103(a) as being unpatentable over Date et al. Patent No. 6,576,081.

1. Date et al. (cols. 12-13, Example 2 and col. 15, lines 14-23, items (1) and (2), Examples 9 and 10) show two-pack adhesives obtained from an A agent containing an acrylic monomer such as the elected species of ethylene glycol dimethacrylate (col. 4, lines 29-30) and a reducing agent such as the elected species of N,N-dimethyltoluidine (col. 4, lines 59-60) combined with a B agent containing a peroxide. An antioxidant, adhesion promoter and an organic solvent such as methyl ethyl ketone, methyl isobutyl ketone or acetone can be added (col. 7, lines 27, 29-30 and 32-36).

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2. The claimed presence of the antioxidant in the part with the N,N-disubstituted amine and a solvent in the part with the (hydro)peroxide is not recited. It would have been obvious to add the antioxidant of Date et al. in the A agent with the acrylic monomer and N,N-dimethyltoluidine in order to stabilize the formulation. It would have been obvious to blend the B agent with the solvent disclosed in Date et al. in order to optimize the viscosity.

Claims 24, 26-28 and 31, 88 and 89 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn et al. Patent No. 4,581,427, European Patent No. 452,540 and Japanese Patent No. 53-144760 (Japanese '760).

3. Dunn et al. (col. 3, lines 1-33) shows an adhesive comprising Part 1 containing benzoyl peroxide, a stock solution of vinyl monomers including 1,3-butylene glycol dimethacrylate and a 2,6-di-t-butyl-4-methoxyphenol stabilizer, and Part 2 prepared from a stock solution of vinyl monomers including 1,3-butylene glycol dimethacrylate and a N,N-dihydroxyethyl-p-toluidine accelerator. The equivalency between the exemplified stabilizer and the elected species of hydroquinone is established in column 2, lines 41-43). The use of tertiary aromatic amine accelerators in general such as N,N-diethyl-p-toluidine (col. 2, lines 35-38) is disclosed.

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4. The claimed combination of (meth)acrylate monomer, N,N-disubstituted aromatic amine and antioxidant in Part A is not recited. The teachings of Dunn et al. are not confined to the examples. Column 1, lines 60-66 espouses the presence of the stabilizer (iii) independent of either the vinyl monomer (i) or the cure system (ii) comprising the tertiary aromatic amine accelerator.
5. It would have been obvious to incorporate the stabilizer into the part of the adhesive containing the tertiary aromatic amine accelerator in order to stabilize the part.
6. The claimed solvent in Part B with the (hydro)peroxide free-radical initiator embraces the stock solution of vinyl monomers together with the benzoyl peroxide in Part 1 of Dunn et al. which functions as a solvent.
7. The European patent sets forth an adhesive comprising a first component containing from 1-60% by weight of an alkanediol dimethacrylate and an organic peroxide and a second component containing (poly)methacrylates and N,N-dimethyl-p-toluidine.
8. The Japanese '760 discloses a two-liquid adhesive prepared wherein both liquids contain an alkyl (meth)acrylate, beta-hydroxyalkyl (meth)acrylate or polyethylene glycol dimethacrylate and one liquid includes benzoyl peroxide and the other liquid has dimethyl-p-toluidine. The European and Japanese patents do not recite the claimed antioxidant in the part with the (meth)acrylate monomer, N,N-disubstituted aromatic amine.

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It would have been obvious to employ the hydroquinone of Dunn et al. into the parts of the European and Japanese patents containing the (meth)acrylate monomer and N,N-di(ethyl or methyl)-p-toluidine for stabilization.

9. The claimed solvent in Part B with the (hydro)peroxide free-radical initiator encompasses the two-liquid adhesive of the Japanese patent and the two-component adhesive of the European patent wherein the methacrylate monomers perform as solvents.

Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Date et al. as applied to claims 24-28, 31 and 88-90 hereinabove, and further in view of Edelman et al.

10. The fused silica in Part A with the (meth)acrylate monomer, N,N-disubstituted aromatic amine and antioxidant denoted in claim 29 is not recited. Edelman et al. (col. 2, lines 43-57) espouses a two-part adhesive derived from (meth)acrylate monomers, additives such as thickeners, adhesion promoters and a fumed silica thixotropic agent (col. 4, lines 6-12) and a hydroperoxide admixed with an activator second part of a substituted dihydropyridine.

11. It would have been obvious to use the fumed silica thixotropic agent in the A agent of Date et al. containing the acrylic monomer and N,N-dimethyltoluidine in order to optimize the viscosity.

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Claims 25, 29 and 90 rejected under 35 U.S.C. 103(a) as being unpatentable over Dunn et al. and the European and Japanese '760 as applied to claims 24, 26-28 and 31, 88 and 89 hereinabove, and further in view of Edelman et al., Date et al. and Japanese Patent No. 59-91165 (Japanese '165).

12. The additional inclusion of the thickener, thixotrope and/or adhesion promoter of claim 25, the presence of fused silica in Part A with the (meth)acrylic monomer, N,N-disubstituted aromatic amine and antioxidant defined in claim 29 and the solvent being a ketone in claim 90 are not recited.

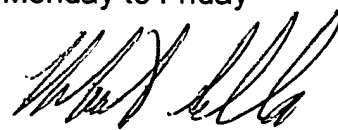
13. Date et al. and Edelman et al. are described in previous paragraphs 1 and 11. Japanese '165 teaches a two-liquid adhesive wherein Liquid A comprises (meth)acrylate monomers and an accelerator, and Liquid B comprises benzoyl peroxide in an organic solvent.

14. It would have been obvious to incorporate an adhesion promoter and/or a thixotropic agent such as the fumed silica of Edelman et al. into the part of Dunn et al., the European patent and Japanese '760 with the (meth)acrylate monomers and N,N-di(ethyl or methyl)-p-toluidine in order to control the viscosity.

15. It would have been obvious to blend the peroxide of Dunn et al., the European patent and Japanese '760 with the solvent of Date et al. and Japanese '165 such as the methyl ethyl ketone, methyl isobutyl ketone or acetone of Date et al. in order to optimize the viscosity.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Sellers whose telephone number is (571) 272-1093. The examiner can normally be reached on Monday to Friday from 9:30 to 6:00.

rs 4/29/2005



ROBERT E.L. SELLERS  
PRIMARY EXAMINER